

THAT WHICH IS CLAIMED:

1. A laminating resin composition comprising:  
an unsaturated polyester resin;  
a vinyl ester resin;  
5 a polyfunctional acrylate; and  
less than about 15 percent by weight of a vinyl monomer.

2. The laminating resin composition according to Claim 1 wherein said unsaturated polyester resin has a weight average molecular weight ranging from about 300 to 2000.

3. The laminating resin composition according to Claim 1 wherein said vinyl ester resin has a weight average molecular weight ranging from about 450 to 1500.

4. The laminating resin composition according to Claim 1 wherein said vinyl ester resin is formed from the reaction product of an unsaturated polycarboxylic acid or anhydride with an epoxy resin.

5. The laminating resin composition according to Claim 1 wherein said polyfunctional acrylate is selected from the group consisting of ethylene glycol dimethacrylate, butanediol dimethacrylate, trimethylol propane trimethacrylate, and mixtures thereof.

6. The laminating resin composition according to Claim 1 wherein said vinyl monomer is selected from the group consisting of styrene and vinyl toluene.

7. The laminating resin composition according to Claim 1 further comprising a dicyclopentadiene resin.

8. The laminating resin composition according to Claim 1 further comprising hydroxypropyl methacrylate.

5 9. The laminating resin composition according to Claim 1 wherein said unsaturated polyester resin comprises a component selected from the group consisting of acrylic acid, methacrylic acid, cinnamyl alcohol, crotonic acid, cinnamic acid, sorbic acid, maleic acid, fumaric acid, itaconic acid, benzoic acid, benzyl alcohol, cyclohexanol, 2-ethyl hexanol, trimethylol propane diallyl ether, and mixtures thereof.

10. A laminating resin composition comprising:

from about 25 to 50 percent by weight of an unsaturated polyester resin;

5 from about 1 to 75 percent by weight of a vinyl ester resin;

from about 1 to 15 percent by weight of a polyfunctional acrylate;

less than about 15 percent by weight of a vinyl monomer; and

from about 5 to 45 percent by weight of a dicyclopentadiene resin.

11. The laminating resin composition according to Claim 10 wherein said unsaturated polyester resin has a weight average molecular weight ranging from about 300 to 2000.

12. The laminating resin composition according to Claim 10 wherein said vinyl ester resin has a weight average molecular weight ranging from about 450 to 1500.

13. The laminating resin composition according to Claim 10 wherein said vinyl ester resin is formed from the reaction product of an unsaturated polycarboxylic acid or anhydride with an epoxy resin.

14. The laminating resin composition according to Claim 10 wherein said polyfunctional acrylate is selected from the group consisting of ethylene glycol dimethacrylate, butanediol dimethacrylate, trimethylol propane trimethacrylate, and mixtures thereof.

15. The laminating resin composition according to Claim 10 wherein said vinyl monomer is

selected from the group consisting of styrene and vinyl toluene.

16. The laminating resin composition according to Claim 10 further comprising a dicyclopentadiene resin.

17. The laminating resin composition according to Claim 10 further comprising hydroxypropyl methacrylate.

18. The laminating resin composition according to Claim 10 wherein said unsaturated polyester resin further comprises a component selected from the group consisting of acrylic acid, methacrylic acid, cinnamyl alcohol, crotonic acid, cinnamic acid, sorbic acid, maleic acid, fumaric acid, itaconic acid, benzoic acid, benzyl alcohol, cyclohexanol, 2-ethyl hexanol, trimethylol propane diallyl ether, and mixtures thereof.

19. An article of manufacture comprising:  
a substrate comprising reinforcing fibrous material; and

a laminating resin coated onto said substrate, said laminating resin comprising an unsaturated polyester resin, a vinyl ester resin, a polyfunctional acrylate, and less than about 15 percent by weight of a vinyl monomer.

20. The article of manufacture according to Claim 19 wherein the unsaturated polyester resin has a weight average molecular weight ranging from about 300 to 2000.

21. The article of manufacture according to Claim 19 wherein the vinyl ester resin has a weight average molecular weight ranging from about 450 to 1500.

22. The article of manufacture according to Claim 19 wherein the polyfunctional acrylate is ethylene glycol dimethacrylate, butanediol dimethacrylate, trimethylol propane trimethacrylate, and mixtures thereof.

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23. The article of manufacture according to Claim 19 wherein the vinyl monomer is selected from the group consisting of styrene and vinyl toluene.

24. The article of manufacture according to Claim 19 wherein said laminating resin further comprises a dicyclopentadiene resin.

25. The article of manufacture according to Claim 19 wherein said laminating resin further comprises hydroxypropyl methacrylate.

26. The article of manufacture according to Claim 19 wherein the unsaturated polyester resin comprises a component selected from the group consisting of acrylic acid, methacrylic acid, cinnamyl alcohol, crotonic acid, cinnamic acid, sorbic acid, maleic acid, fumaric acid, itaconic acid, benzoic acid, benzyl alcohol, cyclohexanol, 2-ethyl hexanol, trimethylol propane diallyl ether, and mixtures thereof.

27. The article of manufacture according to Claim 19 wherein said reinforced fibrous material comprises fibers selected from the group consisting of fibrous glass, carbon fibers, aromatic polyamide fibers, inorganic fibers, and mixtures thereof.